UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2009*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

   4a) Of the above claim(s) *2,4-6,12,13,16 and 20-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,7-11,14,15 and 17-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 September 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1.   Applicant's election with traverse of Invention I (claims 1, 3, 7-11, 14-15, 17-19)

in the reply filed on April 27, 2009 is acknowledged.

The traversal is on the ground(s) that claim 16 reads on FIG. 3 and falls into the

same class/subclass. This is not found persuasive because reading on a particular

drawing does not necessarily preclude a restriction requirement (for example, a drawing

showing components of a computer and components of a peripheral device, with a

connection between the computer and the peripheral device does not preclude

restriction when one invention is directed to the computer, and the other invention is

directed to the peripheral device), and because falling into the same class/subclass

alone is not sufficient to preclude a restriction requirement. In the instant case,

Invention I and Invention II are distinct because applicant did not indicate Invention II

being an obvious variant of Invention I, and because the system of Invention I can be

used to practice a method that is materially different from the method of Invention II (see

office action mailed February 27, 2009).

The traversal is also on the ground(s) that claim 25 reads on FIG. 3 and claim 25

is similar to original claim 1. This is not found persuasive because reading on a

particular drawing does not necessarily preclude a restriction requirement (see

response above), and because claim 25 does not have the same scope as original

claim 1 (note that applicant already admits in the REMARKS section of the response

filed December 17, 2008 (page 18, lines 2-6) that claim 25 is different from original

claim 1). In the instant case, Invention I and Invention III are distinct because applicant

did not indicate Invention III being an obvious variant of Invention I, and because it was

shown that at least one invention is separately usable (see office action mailed

February 27, 2009)

      The requirement is still deemed proper and is therefore made FINAL.

2.   Claims 16, 25 are withdrawn from further consideration pursuant to 37 CFR

1.142(b), as being drawn to nonelected inventions, there being no allowable generic or

linking claim.

Drawings

3.   The replacement drawing for FIG. 1 (filed September 16, 2008) is accepted.

Information Disclosure Statement

4.   The examiner acknowledges that applicant indicates references E21, E25, E30,

E31, E33, E34 and E39 are more relevant than other references filed by applicant in the

Information Disclosure Statement filed March 13, 2008.

Claim Objections

5.   Claims 1, 3 are objected to because of the following informalities:

      "a said pre-conversion symbol" in lines 20-21 should be replaced with --said pre-

conversion symbol--

      "pre-conversion sequence" should be replaced with --sequence of pre-conversion

symbols-- for consistency unless applicant considers the "pre-conversion sequence"

being a different sequence

"said first said symbol-input-end-symbol" in lines 6-7 of claim 3 should be

replaced with --said first symbol-input-end-symbol-- for clarity

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

7.   Claims 1, 3, 7-11, 14, 15, 17-19 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention.

The 112 rejections that follow are based on applicant previously indicating

applicant's intention to claim FIG. 13.

Claim 1 recites "a plurality of printable symbols, comprising pre-conversion

symbols, post-conversion symbols, and non-conversion symbols" in lines 3-5. It is not

clear which symbols of FIG. 13 are considered by applicant as pre-conversion symbols,

which symbols of FIG. 13 are considered by applicant as post-conversion symbols, and

which symbols of FIG. 13 are considered by applicant as non-conversion symbols.

Clarification is required.

Claim 1 recites "at least one fixed sequence of keystrokes corresponds to more

than one pre-conversion symbol or sequence of pre-conversion symbols" in lines 8-9. It

is not clear what applicant considers to be more than one pre-conversion symbol in FIG.

13, and what applicant considers to be a sequence of pre-conversion symbols in FIG. 13. It appears that a sequence of pre-conversion symbols would comprise more than one pre-conversion symbol.

Claim 1 recites "a plurality of symbol-input-end symbols each of which can be input by a keystroke on a key having a printable symbol assigned to it" in lines 14-15. It appears that applicant considers a symbol-input-end symbol being inputted by a keystroke on a key with 3DEF assigned to it in FIG. 13 - hence suggesting a key having more than one printable symbol assigned to it. Clarification is required.

Claim 1 recites "a second mechanism to recognize, upon input of a symbol-input-end symbol, elements of a set of trigger sequences of keystrokes and thereby trigger conversion of a said pre-conversion symbol or pre-conversion sequence displayed on said display to a post-conversion sequence comprising a post-conversion symbol" in lines 19-23. It is not clear what applicant considers to be a set of trigger sequences of keystrokes, what applicant considers to be elements of a set of trigger sequences of keystrokes, what applicant considers to be a post-conversion sequence comprising a post-conversion symbol, what applicant considers to be a post-conversion sequence, and what applicant considers to be a post-conversion symbol in FIG. 13. Clarification is required.

Claim 1 recites "said trigger sequences in said first class of trigger sequences characterized in that they comprise a subsequence of keystrokes" in lines 26-27. It is not clear what applicant considers to be a subsequence of keystrokes for the first class of trigger sequences. Clarification is required.

Claim 1 recites "said subsequence comprising at least two keystrokes such that a first keystroke...and where each subsequent keystroke on a key having a printable symbol assigned to it generates a symbol-input-end symbol which applies to an immediately previously displayed printable symbol to cause input of said immediately previously displayed printable symbol and additionally causes display of a further printable symbol. The limitation suggests the subsequence comprising more than two keystrokes. It is not clear where FIG. 13 provides support for **a second keystroke** on a key having a printable symbol assigned to it generating a symbol-input-end symbol which applies to an immediately previously displayed printable symbol to cause input of said immediately previously displayed printable symbol and additionally causes display of a further printable symbol, **followed by a third keystroke** on a key having a printable symbol assigned to it generating a symbol-input-end symbol which applies to an immediately previously displayed printable symbol to cause input of said immediately previously displayed printable symbol and additionally causes display of a further printable symbol. It also appears that applicant considers a symbol-input-end symbol being inputted by a keystroke on a key with 3DEF assigned to it in FIG. 13 - hence suggesting a key having more than one printable symbol assigned to it. Clarification is required.

Claim 1 recites "said subsequent subsequence" in line 35. There is insufficient antecedent basis for the limitation in the claim.

Claim 1 recites "where a last keystroke of said subsequent subsequence of keystrokes generates a last symbol-input-end symbol applying to a last immediately

previously displayed printable symbol, and additionally displays a last further printable symbol assigned to the key of said last keystroke" in lines 35-38. It is not clear what applicant considers to be a last keystroke of said subsequent subsequence of keystrokes, what applicant considers to be a subsequent subsequence of keystrokes, what applicant considers to be a last immediately previously displayed printable symbol, and what applicant considers to be a last further printable symbol assigned to the key of said last keystroke in FIG. 13. Clarification is required.

Claim 1 recites "when said last immediately previously displayed printable symbol is converted, alone or as the last of a sequence of printable symbols" in lines 40-41. It is not clear where FIG. 13 supports when said last immediately previously displayed printable symbol is converted alone. It appears that FIG. 13 only supports when said last immediately previously displayed printable symbol is converted as the last of a sequence of printable symbols. Clarification is required.

Claim 1 recites "said trigger sequence" in line 44. There is insufficient antecedent basis for the limitation in the claim.

Claim 1 recites "so that it is recognized" in line 44. It is not clear whether the trigger sequence is recognized, or whether the last keystroke is recognized. Clarification is required.

Claim 3 recites limitations which do not allow the examiner to determine the scope of the claim – as the limitations appears to be beyond what FIG. 13 discloses. For example, claim 3 recites "said first keystroke or subsequence of keystrokes" in line 10 and "a first subsequent keystroke or subsequence of keystrokes" in lines 11-12. This

limitation is ambiguous because "a first subsequent keystroke" is the second keystroke

in the "first subsequence of keystroke", because it is not clear that the "subsequence of

keystrokes" in line 10 is a "first subsequence of keystrokes", because it is not clear that

the "subsequence of keystrokes" in line 12 is a "second subsequence of keystrokes",

and because it is not clear whether the "subsequence of keystrokes" in line 10 is the

same as the "subsequence of keystrokes" in line 12.   The examiner requests that

applicant clarifies the scope of the invention by providing a thorough explanation of what

is being claimed, or by specifically point out in the specification the scope that applicant

intends to claim.

Claim 7 recites "a third mechanism to convert a sequence of pre-conversion

symbols to a post conversion symbol upon recognition of said trigger sequences by the

second mechanism" in lines 1-3. It appears that there is only one trigger sequence that

is recognized in FIG. 13 by the second mechanism for converting a sequence of pre-

conversion symbols to a post conversion symbol. Clarification is required.

8.   As shown above, the invention was not claimed in a way which particularly points

out and distinctively defines the metes and bounds of the subject matter illustrated by

FIG. 13 of applicant's disclosure. Because of the numerous outstanding 112 issues, it

is not possible to clearly determine the scope of the claims.

The examiner therefore strongly suggests that applicant maps limitations of

claims 1 and 3 to specific teachings in the disclosure (preferably by column, line

numbers and/or labels and drawings of US publication 2005/0060448 – by Gutowitz) to

avoid unnecessary 112 rejections, help the examiner determine the scope of the claims

and further the prosecution - when amending the claims. The examiner notes that when

an applicant maps out the limitations of a claim, 112 rejections are usually less likely.

Note that the USPTO is justified in requiring the applicant to more precisely

define the metes and bounds of the claimed invention by holding the claim unpatentable

under 35 USC 112, second paragraph, as indefinite - if a claim is amenable to two or

more plausible claim constructions. Note further that the examiner cannot determine

whether there is allowable subject matter – when the scope of the claims cannot be

determined. There is no patentability to an invention with a scope of claims that cannot

be determined.

9.   The rejections that follow are based on the examiner's best interpretation of the

claims.

Claim Rejections - 35 USC § 102/103

10.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12.   Claims 1, 7, 10-11, 18-19 are rejected under 35 U.S.C. 102(b) as being

anticipated by Balakrishnan et al. (US 5,952,942). Claims 8-9, 14 are rejected under 35

U.S.C. 103(a) as being unpatentable over Balakrishnan et al..

13.   As per claim 1, Balakrishnan teaches a text-entry system (FIGs. 1-2) based on

trigger sequences comprising

        1) a plurality of keys (FIG. 1),

        2) a plurality of printable symbols comprising pre-conversion symbols (symbols

on keypad, FIG. 1), post-conversion symbols (text in display 14, FIG. 1) and non-

conversion symbols (number, text that are not converted in display 14, FIG. 1),

                such that at least one of said keys is assigned more than one of said pre-

        conversion symbols (FIG. 1) and

                such that at least one fixed sequence of keystrokes (2255 (col. 4, lines 19-

        21)) corresponds to more than one pre-conversion symbol or sequence of pre-

        conversion symbols (BALK BALL CALK CALL (col. 5, lines 3-5)),

                each of said post-conversion symbols being set in a correspondence to a

        pre-conversion symbol or sequence of pre-conversion symbols (e.g. pre-

        conversion symbols CALL correspond to post-conversion symbols CALL),

        3) a plurality of symbol-input-end symbols each of which can be input by a

keystroke on a key having a printable symbol assigned to it (col. 6, lines 43-50),

        4) a display (14, FIG. 1) to display said plurality of printable symbols,

        5) a first mechanism to display said plurality of printable symbols in response to

keystrokes (13, 17 - FIG. 1), and

6) a second mechanism to recognize, upon input of a symbol-input-end symbol,

elements of a set of trigger sequences of keystrokes and thereby trigger conversion of a

said pre-conversion symbol or pre-conversion sequence displayed on said display to a

post-conversion sequence comprising a post-conversion symbol (symbol-input-end is

inputted in step 197, FIG. 5 to set a last word - hence triggering conversion of pre-

conversion sequence in the display area 17 to post-conversion sequence in display

area –5; 2255 followed by key 19 followed by a key that is neither key 19 or key 18 is an

element of a set of trigger sequences of keystrokes (see 182-184-190-192-195-197,

FIG. 5); step 193 FIG. 5 suggests other elements of the set of trigger sequences of

keystrokes),

said elements of a set of trigger sequences comprising classes of trigger

sequences, said classes comprising a first class of trigger sequences (class

trigger sequences with steps 182-184-190-192-195-197 of FIG. 5 is a first class

of trigger sequences),

said trigger sequences in said first class of trigger sequences

characterized in that they comprise a subsequence of keystrokes (key 19

followed by a key that is neither key 19 or key 18),

said subsequence comprising at least two keystrokes (key 19 followed by

a key that is neither key 19 or key 18) such that a first keystroke of said

subsequence of keystrokes causes said first mechanism to display a first pre-

conversion symbol (key 19 at step 182 causes display of pre-conversion symbol

with highest priority match in display area 17, FIG. 1), and where each

subsequent keystroke keystrokes on a key having a printable symbol assigned to

it generates a symbol-input-end symbol which applies to an immediately

previously displayed printable symbol to cause input of said immediately

previously displayed printable symbol and additionally causes display of a further

printable symbol (step 197 suggests the second keystroke generating a symbol-

input-end symbol which applies to pre-conversion symbol with highest priority

match in display area 17, FIG. 1 to cause input of said pre-conversion symbol

and additionally causes display of the second keystroke that starts a new word),

where a last keystroke of said subsequence of keystrokes (second key

that is neither key 19 or key 18) generates a last symbol-input-end symbol

applying to a last immediately previously displayed printable symbol, and

additionally displays a last further printable symbol assigned to the key of said

last keystroke (step 197 suggests the second keystroke generating a symbol-

input-end symbol which applies to pre-conversion symbol with highest priority

match in display area 17, FIG. 1 to cause input of said pre-conversion symbol

and additionally causes display of the second keystroke that starts a new word),

said last further printable symbol characterized as displayed and not

converted (step 197, FIG. 5 - start of a new word is displayed and not converted)

when said last immediately previously displayed printable symbol is converted

(step 197, FIG. 5 - the last word is set), alone or as the last of a sequence of

printable symbols, into a post-conversion symbol (last word is set), when said

last immediately previously displayed printable symbol is a pre-conversion

symbol, said last keystroke (second keystroke) of said subsequence of

keystrokes completing said trigger sequence (first keystroke and second

keystroke), so that it is recognized by said second mechanism, permitting

conversion of said last immediately previously displayed printable symbol, alone

or as the last of a sequence of printable symbols, to a post-conversion symbol

when said last immediately previously displayed printable symbol is a pre-

conversion symbol before any further keystroke is made (last word is set before a

keystroke that immediately follows the second keystroke) and while also causing

display of the printable symbol assigned to the key of said last keystroke for

possible later inclusion in a subsequent sequence of pre-conversion symbols

corresponding to a subsequent post-conversion symbol (first symbol of the new

word is displayed in display area 17, FIG. 1).

14.   As per claim 7, Balakrishnan teaches converting a sequence of pre-conversion

symbols to a post conversion symbol upon recognition of a trigger sequence by the

second mechanism (see rejection of claim 1 above) – hence a third mechanism for such

conversion.

15.   As per claim 8, Balakrishnan does not teach the third mechanism being

physically remote from the first mechanism. It was however recognized in the art that

implementing two mechanisms separately is no more than an obvious variant of

implementing two mechanisms together – hence the third mechanism being physically

remote from the first mechanism being no more than an obvious variant of the

implementation disclosed by Balakrishnan.

16.   As per claim 9, Balakrishnan teaches the conversion being performed based on a context comprising other input symbols (31, 33, 34 – FIG. 2; col. 4, line 48-col. 5, line 5).

17.   As per claim 10, Balakrishnan teaches a predictive text mechanism operating to select pre-conversion symbols for display based on a context comprising other input sysmbols (31, 33, 34 – FIG. 2; col. 4, line 48-col. 5, line 5).

18.   As per claim 11, Balakrishnan teaches a Next key (key 19, FIG. 1) for incrementing symbols in an ordered list containing more than one element, the Next key being characterized in that a keystroke on the Next Key does not generate a symbol-input-end-symbol (col. 6, lines 30-38).

19.   As per claim 14, Balakrishnan teaches a first Next key such that a keystroke on the first Next key advances the pre-conversion symbols in an order and does not generate a symbol-input-end-symbol (col. 6, lines 30-38). In addition, it was known in the art to incorporate a separate Next key such that a keystroke on the separate Next key advances non-conversion symbols in an order and does not generate a symbol-input-end-symbol in order to select a desired non-conversion symbol. It would have been obvious to one of ordinary skill in the art to incorporate a second Next key that is used for advancing non-conversion symbols and does not generate a symbol-input-end-symbol in order to select a desired non-conversion symbol.

20.   As per claim 18, Balakrishnan teaches a word-based predictive mechanism (col. 4, line 17-col. 5, line 5).

21.   As per claim 19, Balakrishnan teaches a word-completion mechanism (col. 4, line

17-col. 5, line 5).

Response to Arguments

22.   Applicant's arguments with respect to the elected claims have been considered

but are moot in view of the new ground(s) of rejection.

Conclusion

23.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

King et al. (US 5,953,541) teaches stems of longer words whose initial letters

match the sequence of keystrokes being presented in a list in order of decreasing

frequency of use, and the first word of the list being automatically selected by the input

of the first character in the next word (Abstract, lines 11-15).

24.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

25.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to TANH Q. NGUYEN whose telephone number is

(571)272-4154. The examiner can normally be reached on M-F (9:30AM-6:00PM).

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, TARIQ HAFIZ can be reached on (571)272-6729. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TANH Q. NGUYEN/
Primary Examiner, Art Unit 2182

TQN: August 2, 2009